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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/621,064	07/16/2003	Kiyoshi Hirota	MAT-8446US	8839

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EXAMINER	
THOMAS, ERIC W	

ART UNIT	PAPER NUMBER
2831	

DATE MAILED: 06/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application N .	Applicant(s)	
	10/621,064	HIROTA ET AL.	
	Examiner	Art Unit	
	Eric W Thomas	2831	

-- The MAILING DATE f this communication appears on the cover sheet with the c rrespondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 January 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *1/12/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

INTRODUCTION

The examiner acknowledges, as recommended in the MPEP, the applicant's submission of the amendment dated 1/12/04. At this point, claims 10-11have been amended. Thus claims 1-11 are pending in the instant application.

DETAILED ACTION

Claim Objections

1. Claims 1-8, 10-11 are objected to because of the following informalities:

Claim 1, line 2, the limitation, "foil which makes anode" is confusing. It is suggested to applicant to change this limitation to –foil which makes an anode--.

Claim 1, line 6, change "with exception of anode lead portion" to –with exception to an anode lead portion--.

Claim 2, line 2, the limitation, "foil which makes anode" is confusing. It is suggested to applicant to change this limitation to –foil which makes an anode--.Claim 2, line 7, change "with exception of anode lead portion" to –with exception to an anode lead portion--.

Claim 3, line 2, the limitation, "foil which makes anode" is confusing. It is suggested to applicant to change this limitation to –foil which makes an anode--.

Claim 3 recites the limitation "the surface of end face" in line 5. There is insufficient antecedent basis for this limitation in the claim. The examiner interpreted this limitation as "the end face of one of said surfaces."

Claim 3, line 5, delete, "making anode"

Claim 4, line 2, the limitation, "foil which makes anode" is confusing. It is suggested to applicant to change this limitation to –foil which makes an anode--.

Claim 5, line 2, the limitation, "foil which makes anode" is confusing. It is suggested to applicant to change this limitation to –foil which makes an anode--.

Claim 5 recites the limitation "the anode lead portion" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim 6, line 2, the limitation, "foil which makes anode" is confusing. It is suggested to applicant to change this limitation to –foil which makes an anode--.

Claim 6 recites the limitation "the anode lead portion" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim 6, line 5, the limitation, "of anode lead portion" is confusing. Is this in addition to the anode lead portion already claimed?

Claim 7, line 2, the limitation, "foil which makes anode" is confusing. It is suggested to applicant to change this limitation to –foil which makes an anode--.

Claim 8 recites the limitation "the foam metal and sponge metal" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 10, line 1, the limitation, "The anode body for solid electrolytic capacitor recited in claim 1, which anode body" is confusing. It is suggested to applicant to change this limitation to –The anode body for the solid electrolytic capacitor recited in claim 1, which the anode body--.

Claim 10, line 4, change "in a solid electrolytic capacitor" to –in the [a] electrolytic capacitor--.

Claim 11, line 1, the limitation, "The anode body for solid electrolytic capacitor recited in claim 4, which anode body" is confusing. It is suggested to applicant to change this limitation to –The anode body for the solid electrolytic capacitor recited in claim 4, which the anode body--.

Claim 11, line 4, change "in a solid electrolytic capacitor" to –in the [a] electrolytic capacitor--.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 3-7, 10-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Masuda et al. (US 6,400,556).

FIG. 2

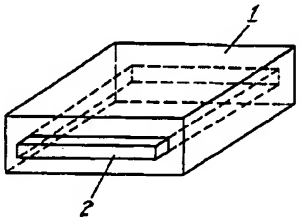
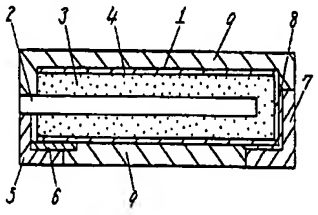


FIG. 1



Masuda et al. disclose in fig. 1 & 2, an anode body for solid electrolytic capacitor comprising a valve metal foil (2 – col. 3 lines 19-21) which makes an anode, and a layer of sintered body (col. 3 lines 22-25) formed of said valve metal provided on the upper

and lower surfaces of said valve metal foil (see fig. 2), wherein said sintered layer covers the entire side faces of said valve metal foil in three directions with exception of an anode lead portion.

Regarding claim 2, Masuda et al. disclose in fig. 1, & 2, an anode body for a solid electrolytic capacitor comprising a valve metal foil (2 – col. 3 lines 19-21) which makes an anode, and a layer of sintered body (col. 3 lines 22-25) formed of said valve metal provided on the upper and lower surfaces of said valve metal foil (see fig. 2), and a dielectric film formed on the outer surface of the sintered layer, wherein the dielectric film formed on the surface of three side-faces of the valve metal foil (col. 3 lines 26-28) with exception of the anode lead portion which is covered with a resist material (9).

Regarding claim 3, Masuda et al. disclose in fig. 1 & 2, an anode body for solid electrolytic capacitor comprising a valve metal foil (2) which makes an anode, and a layer of sintered body (3) formed of the valve metal provided on the upper and lower surfaces of the valve metal foil, wherein the end face of one of said surfaces of said valve metal foil is roughened (see col. 3 lines 20-22).

Regarding claim 4, Masuda et al. illustrate in fig. 1 & 2, an anode body for solid electrolytic capacitor comprising a valve metal foil (2) which makes an anode, and a layer of sintered body (3) formed of the valve metal provided on the upper and lower surfaces of the valve metal foil, wherein a flat plane area of the valve metal foil covered with the sintered layer is not less than one half that the flat plane area of the sintered layer (see fig. 1, and 2).

Regarding claim 5, Masuda et al. illustrate in fig. 1 & 2, an anode body for solid electrolytic capacitor comprising a valve metal foil (2) which makes an anode, and a layer of sintered body (3) formed of the valve metal foil with exception of an anode lead portion, wherein a ratio of cross sectional area of the anode lead portion of the valve metal foil to that of the sintered layer is above 10 % (as illustrate in fig. 1, and 2 – example 1 & claim 8).

Regarding claim 6, Masuda et al. illustrate in fig. 1 & 2, an anode body for a solid electrolytic capacitor comprising an anode body for solid electrolytic capacitor comprising a valve metal foil (2) which makes an anode, and a layer of sintered body (3) formed of the valve metal foil with exception of an anode lead portion, wherein a flat plane area, and a cross-sectional area of the anode lead portion of the valve metal foil have at least the same square measure as the corresponding areas of valve metal foil covered with sintered layer.

Regarding claim 7, Masuda et al. disclose in fig. 1 & 2, an anode body for a solid electrolytic capacitor comprising a porous (col. 3 lines 5-25) valve metal which makes an anode, and a layer of sintered body formed of valve metal provided on the upper and lower surfaces of said porous valve metal.

Regarding claim 10, Masuda et al. disclose in fig. 1, & 2, the anode body for the solid electrolyte capacitor, which the anode body having a dielectric film (col. 3 lines 26-28), a solid electrolyte layer (col. 3 lines 26-28), and a cathode layer (4) laminated in the order on the outer surface with exception of the anode lead portion, the anode body included in the solid electrolytic capacitor.

Regarding claim 11, Masuda et al. disclose in fig. 1, & 2, the anode body for the solid electrolyte capacitor, which the anode body having a dielectric film (col. 3 lines 26-28), a solid electrolyte layer (col. 3 lines 26-28), and a cathode layer (4) laminated in the order on the outer surface with exception of the anode lead portion, the anode body included in the solid electrolytic capacitor.

4. Claim 9 is rejected under 35 U.S.C. 102(b) as being anticipated by Tanahashi et al. (US 6,185,091).

Tanahashi et al. disclose in fig. 8A, an anode body (66) for a solid electrolytic capacitor comprising a porous (etched) valve metal which makes an anode (66), which has an anode lead portion (66b) and a cathode portion (67) with a boundary (oxide). Regarding the limitation, "which has been separated into an anode portion and a cathode portion with a boundary between" is a method of forming the device. The method of forming the device is not germane to the patentability to the device itself.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Masuda et al. (US 6,400,556) in view of Uchi et al. (US 6,038,124).

Masuda et al. disclose the claimed invention except for the porous valve metal is either one among a foam metal and a sponge metal.

Uchi et al. teach the use of a sponge metal foil. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to form the foil of Masuda et al. using a sponge material as taught by Uchi et al., since such a modification would provide a foil having high mechanical strength, and increased capacitance.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

6,320,742 – teaches the use of a resist tape formed on the anode lead.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric W Thomas whose telephone number is 571-272-1985. The examiner can normally be reached on M,Tu,Sat 9 am - 9:30 pm; W, Th, F 6 pm -10:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on 571-272-1984. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Eric W Thomas
Examiner
Art Unit 2831

6-1-04

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